

# Theta\_gamma vs Pt

# MILOU

FFS

$$\frac{d^3\sigma^{\text{DVCS}}}{dx dQ^2 dt} = \frac{\pi^2 \alpha^3 s (1 + (1-y)^2)}{2xR^2 Q^6} e^{-b|t|} F_2^2(x, Q^2) (1 + \rho^2)$$

Written by P. Saull [1999]

Based on:

Frankfurt, Freund and Strikman (FFS)

[Phys. Rev. D 67, 036001 (1998).

Err. Ibid. D 59 119901 (1999)]

GPDs-based

Written by E. Perez, L Schoeffel, L. Favart

[arXiv:hep-ph/0411389v1]

Based on:

A. Freund and M. McDermott

All ref. in: <http://durpdg.dur.ac.uk/hepdata/dvcs.html>

- GPDs, evolved to next-to-leading order
- provide the real and imaginary parts of Compton form factors (CFFs), used to calculate cross sections for DVCS and DVCS-BH interference.
- Proton dissociation ( $ep \rightarrow e \gamma Y$ ) can be included.

# Kinem. cuts

- $1.5 < Q^2 < 100 \text{ GeV}^2$
- $10^{-4} < x < 0.1$
- $0 < |t| < 1.5 \text{ GeV}^2$
- Radiative corrections: OFF
- $t$  slope = 5.00 (constant)

## 30 X 325:

- $E_{\text{el}} = 10 \text{ GeV}$
- $0.0039 < y < 0.67$

Total xsec= 0.186 nb (FFS\_ALLM)

Total xsec= 0.376 nb (GPDs)

## 20 X 250:

- $E_{\text{el}} = 5 \text{ GeV}$
- $0.005 < y < 0.99$

Total xsec= 0.16 nb (FFS\_ALLM)

Total xsec= 0.32 nb (GPDs)

## 10 X 100:

- $E_{\text{el}} = 0 \text{ GeV}$
- $0.005 < y < 0.99$

Total xsec=  $8.1 \cdot 10^{-2}$  nb (FFS\_ALLM)

Total xsec= 0.16 nb (GPDs)



















